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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,646	02/05/2001	Susumu Takahashi	202447US2	8312

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EXAMINER	
SINGH, RACHNA	
ART UNIT	**PAPER NUMBER**
2176	

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/775,646	TAKAHASHI ET AL.	
	Examiner	Art Unit	
	Rachna Singh	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *33-64* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *33-64* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications: Amendment filed 12/02/05.

2. Claims 33-64 are pending. Claims 33, 41, 48, 55, and 60 are independent claims.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 33-34, 41-42, 48-49, 55, and 60 are rejected under 35 U.S.C. 102(e) as being anticipated by Tamaki et al., US 2001/0014836 A1, 8/16/01 (filed 2/12/01, continuation filed 6/19/98).

In reference to claims 33, 41, 48, 55, and 60, Tamaki teaches a production planning system in which a production plan comprises a data storage unit for storing parts list information providing a list of required parts, a parts stock storage section indicating parts stock information. See abstract and page 6, paragraphs [0117]-[0118]. Tamaki discloses an adjusting means in which superfluous or deficient parts are identified from the parts stock information and parts information and the production planning system including the original parts list is modified accordingly. If there are deficient parts or superfluous parts, the parts list information is adjusted to eliminate the

deficient parts as well as superfluous parts. This is equivalent to modifying a structured parts list based on the parts information list. See columns 16-18. The parts list information is generated by the material resource plan unit for calculating the required amount of material resources based on this list. The production system receives production planning information including parts list information from the parts acquisition system. See page 6. The parts acquisition system must receive an indication for retrieval in order to supply the parts list information to the production system. The list of required parts are parts of product in the production planning system (i.e. component). Thus the listed products (i.e. components) in the production planning system include a plurality of parts. Compare to ***"a structured parts list information storage configured to store structured parts list information on components, the listed components including a plurality of kinds of parts, and to output the structured parts list information based on input retrieval information; a parts information storage configured to store parts information on a plurality of parts, and to output the parts information corresponding to the structured parts lists information output from the structured parts list information storage"***. Tamaki further teaches an adjusting means in which superfluous or deficient parts are identified from the parts stock information and parts information. Superfluous parts are eliminated as are deficient parts and the production planning system is adjusted accordingly. See page 6, paragraph [0117]-[0122] and page 18. The parts list information is generated by the material resource plan unit for calculating the required amount of material resources based on this list. The production system receives production planning information

including parts list information from the parts acquisition system. See page 6. The updated structural parts list is provided to the production planning system where it is stored in a data storage unit. See page 18, second column. Compare to ***"a parts information list creating and editing device configured to retrieve parts information on respective parts, stored in said structured parts list information storage based on the input retrieval information, and to create a parts information list; and a structured parts information list creating and editing device configured to create an updated structured parts list information based on said parts information list created by said parts information list created by the parts information list creating and editing device, and to store the updated structural parts list information in a memory for subsequent access."***

In reference to claims 34, 42, and 49, Tamaki teaches that the parts information in storage may include information regarding a name of the part, a feature such as quantity consumed, a cost evaluation module, etc. See figures 24-27.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 35-40, 43-47, 50-54, 56-59, and 61-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamaki et al., US 2001/0014836 A1, 8/16/01 (filed 2/12/01, continuation filed 6/19/98) in view of Tegethoff, US 5,539,652, 7/23/96.

In reference to claims 35-40, Tamaki does not teach a compatibility prediction information output device configured to survey on predetermined items (i.e. packaging density, arrangement, and operation verification) based on parts information list created by parts information list creating/editing device and to create and output decision information for compatibility prediction based on results from said survey. Tegethoff, however, teaches a method for manufacturing test simulation in electronic circuit design. Tegethoff teaches a test simulator that simulates a manufacturing text of boards and multichip modules from design concept to aid the designer in selecting trade-offs in design. The methods models fault probabilities for the circuit design based on the components. Tegethoff further discloses the Manufacturing Test Simulator (MTSIM) which is a concurrent engineering simulation tool for manufacturing test, that is, a tool to predict manufacturing test behavior while a product is still being designed. See column 6. MTSIM uses pareto analysis in which a user can evaluate simulation results to determine faults, test coverage, etc. Pareto analysis can be done at three levels of abstraction including individual components, groups of components with the same part number, and groups of components. All part numbers are assigned a category based on level of integration and functionality. See column 11. Furthermore, Tegethoff teaches that he technology of circuit board assembly is evolving to support density demands of many modern circuit designs. Multi-chip modules and twelve-mil pitch surface mount technology (SMT) are frequently used to improve circuit density. SMT chip packages with lead counts of over 1000 are not uncommon. New fabrication processes are used to enable higher circuit densities usually have higher defect rates

than older low density fabrication technologies. Tegethoff teaches identifying defects in packaging densities. See columns 1-4. It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate Tegethoff's prediction concerning operation, simulation, etc in a system of Tamaki's structured parts list because early prediction of manufacturing behavior drives design changes which optimize the product's manufacturability and testability, thus improving product quality and reducing cost and utilizing a parts list would help facilitate this prediction. See column 6 of Tegethoff.

Claims 43-47 are rejected under the same rationale used in claims 35, 37, 38, 39, and 40 respectively above.

Claims 50-54 are rejected under the same rationale used in claims 35, 37, 38, 39, and 40 respectively above.

Claims 56-59 are rejected under the same rationale used in claims 35, 37, 38, 39, and 40 respectively above.

Claims 61-64 are rejected under the same rationale used in claims 35, 37, 38, 39, and 40 respectively above.

Response to Arguments

7. Applicant's arguments filed 12/02/05 have been fully considered but they are not persuasive.

Applicant amended claims to recite, ***"a structured parts list information storage configured to store structured parts list information on components, <u>the listed components</u> including a plurality of parts"***. Examiner respectfully disagrees.

Tamaki discloses parts list information providing a list of required parts for a product. See abstract and page 6, paragraphs [0117]-[0118]. Tamaki discloses an adjusting means in which superfluous or deficient parts are identified from the parts stock information and parts information and the production planning system including the original parts list is modified accordingly. If there are deficient parts or superfluous parts, the parts list information is adjusted to eliminate the deficient parts as well as superfluous parts. The list of required parts are parts of product in the production planning system (i.e. component). Thus the listed products (i.e. components) in the production planning system include a plurality of parts.

In view of comments above, the rejection is maintained.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachna Singh whose telephone number is 571-272-4099. The examiner can normally be reached on M-F (8:30AM-6:00PM). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 571-272-4136.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RS
02/13/06

DOUG HUTTON
PRIMARY EXAMINER
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